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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

RODRIGUEZ, PAMELA

ART UNIT PAPER NUMBER

3683

DATE MAILED: 03/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/674,021	Applicant(s) GABOURIE, GERALD E.	
	Examiner Pam Rodriguez	Art Unit 3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>09/29/03&12/29/03</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Information Disclosure Statement

1. The IDS' filed both September 29, 2003 and December 29, 2003 have both been received and considered.

Drawings

2. Figure 5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: on page 11 line 4 the term "attachment surface 3" should read --attachment surface 34—to be consistent with the drawings and the previous lines of the specification.

Appropriate correction is required.

Claim Objections

4. Claims 6 and 7 are objected to because of the following informalities: on the second page of Claim 6 in line 13 the word "plurably" should read --plurality-- and in line 3 of Claim 7 the word --the-- should be inserted before the term "wheel hub".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO document no. 98/38048 to Yoshimura.

Regarding Claim 1, Yoshimura discloses a gasket device for use on a wheel hub 4 (see Figure 4), said gasket device comprising an annular, flat gasket seal 53 made of thin, flat, flexible, material and having a circular outer periphery with a first diameter corresponding substantially to the diameter of an annular attachment surface 2 of said hub on which said gasket device is to be used (see Figure 4 and the outer diameter of element 53), said gasket seal 53 also having a circular central opening with a second diameter D1 corresponding substantially to the diameter of a central cylindrical extension 17/50 adjacent said hub and a plurality of small openings for snugly accommodating wheel studs 5 on said hub (see at least the hole designation on the

uppermost portion of element 53), each of which can pass through a respective one of said small openings during use of said gasket device, wherein said gasket device is adapted for mounting in a sealing manner between said hub 4 and a central mounting portion 18 of a vehicle wheel 1 and is capable of conforming to an adjacent back surface 18 of said central mounting portion of the wheel 1 when said gasket device is used (see Figure 4).

However, Yoshimura does not specifically disclose that the gasket is made from a polyethylene material.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the gasket of Yoshimura to be formed from a polyethylene material as a matter of design preference dependent upon the desired strength, corrosive effects, and/or the operating environment for the gasket. Constructing the gasket to be formed of a polyethylene material would provide a flexible yet highly corrosive-resistant means in which to protect the wheel hub components from any dirt or debris that they may encounter.

Regarding Claim 2, Yoshimura does not disclose that the gasket has a substantially uniform thickness which is less than 0.1 inch.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the gasket of Yoshimura to have a thickness which is less than 0.1 inch in order to create as thin a sealing structure as possible. The thinner the gasket for the wheel hub assembly the less complicated and cumbersome the overall wheel design.

Regarding Claim 3, Yoshimura does not specifically disclose that there are five or fewer small openings around the gasket seal.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed five or fewer openings around the circumference of the gasket of Yoshimura dependent upon the number of wheel studs affixed to the wheel. One of ordinary skill in the art would know to construct as made openings for the gasket seal as there are wheel studs to be accommodated, whether that number be five or fewer.

Regarding Claim 4, Yoshimura does not disclose that the small openings have a uniform diameter which does not exceed about 5/8 inch.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the small openings of the gasket of Yoshimura to have uniform diameters which do not exceed 5/8 inch as a matter of design preference dependent upon the size and diameter of the wheel studs which are to be accommodated in those openings. As long as the wheel studs fit through the openings and adequately secure the gasket to the wheel assembly, the diameters of those openings are arbitrary.

Regarding Claim 5, Yoshimura does not disclose that the first diameter of the gasket is less than 8 inches nor that the polyethylene material has a medium density.

Regarding the diameter of the gasket, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the first diameter of the gasket of Yoshimura to be less than 8 inches dependent upon the

overall diameter of the central mounting portion of the wheel to which it contacts with. As long as the gasket seals the space between the central mounting portion and the hub, the diameter of the gasket is arbitrary.

Regarding the density of the polyethylene material, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the polyethylene material of the gasket of Yoshimura to be of a medium density dependent upon the desired strength and rigidity of the gasket. As long as the gasket can effectively seal the space between the central mounting portion and the hub and withstand the operating environment, the density of the material of the gasket is merely a design preference.

7. Claims 6, 7, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,772,286 to Jordan in view of WO document number 98/38048 to Yoshimura.

Regarding Claim 6, Jordan discloses a vehicle wheel and hub combination (see Figure 3) having most of the features of the instant invention including: a vehicle wheel including an annular rim and an annular connecting section extending radially inwardly from said rim and rigidly connected thereto (see the abstract and column 3 lines 29-35), said connecting section having a plurality of stud-receiving holes therein spaced inwardly from said rim and spaced evenly and circumferentially about said wheel (see the abstract and column 3 lines 29-35); a wheel hub assembly including a rotatable radially extending, annular attachment surface 40, wheel studs 38 extending from said attachment surface 40 in an axial direction relative to a central axis about which said

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wheel is adapted to rotate, and a circular central cylindrical extension (see the smaller diameter portion which protrudes out from surface 40 in-between the wheel studs) projecting axially outwardly from the center of said attachment surface 40, said cylindrical extension having an outer circumference spaced radially inwardly from said wheel studs (see Figure 3); an annular, flat, flexible gasket seal 10 having a substantially circular outer periphery and also a substantially circular central opening with a diameter corresponding closely to the diameter of said central cylindrical extension (see Figure 3 and the center diameter of the gasket around which holes 16 are located), said gasket seal being formed with a plurality of small openings 16 snugly and respectively accommodating said wheel studs each of which passes through a respective one of said small openings and a respective one of said stud-receiving holes; and wheel nuts (inherently present) detachably connecting said vehicle wheel to said wheel hub assembly by means of said wheel studs with said gasket seal 10 tightly clamped between said connecting section and said attachment surface (see Figure 3), wherein said gasket seal 10 inherently has a shape that conforms to an adjacent contact surface of said connecting section of the wheel.

However, Jordan does not disclose that the gasket is made from a polyethylene material having a substantially circular outer periphery with a diameter that corresponds substantially to the diameter of the attachment surface.

Regarding the polyethylene material, It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the gasket of Jordan to be formed from a polyethylene material as a matter of design

preference dependent upon the desired strength, corrosive effects, and/or the operating environment for the gasket. Constructing the gasket to be formed of a polyethylene material would provide a flexible yet highly corrosive-resistant means in which to protect the wheel hub components from any dirt or debris that they may encounter.

Regarding the gasket outer periphery diameter, Yoshimura is relied upon merely for his teachings of a similar type gasket 53 (as described with respect to Claims 1-5 above) having a substantially circular outer periphery with a diameter that corresponds substantially to the diameter of the attachment surface 2 or 18.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the gasket of Jordan to have a substantially circular outer periphery with a diameter that corresponds substantially to the diameter of the attachment surface as taught by Yoshimura so that the no debris or dirt could come into contact with the attachment surface from either side of the gasket. By constructing the gasket to be of the exact diameter as the attachment surface, the maximum amount of sealing that can occur between the attachment surface and the connection section of the wheel is present.

Regarding Claim 7, see Figure 3.

Regarding Claim 9, Jordan, as modified, does not disclose that the gasket seal has a uniform thickness which is about 0.05 inch.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the gasket of Jordan, as modified, to have a thickness which is less than 0.05 inch in order to create as thin a sealing structure as

possible. The thinner the gasket for the wheel hub assembly the less complicated and cumbersome the overall wheel design.

Regarding Claim 10, Jordan, as modified, does not disclose that the small openings have a diameter which does not exceed $5/8$ inch nor that the diameter of the outer periphery of the gasket and of the annular attachment surface is less than 8 inches.

Regarding the diameters of the small openings, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the small openings of the gasket of Jordan, as modified, to have uniform diameters which do not exceed $5/8$ inch as a matter of design preference dependent upon the size and diameter of the wheel studs which are to be accommodated in those openings. As long as the wheel studs fit through the openings and adequately secure the gasket to the wheel assembly, the diameters of those openings are arbitrary.

Regarding the diameters of the outer periphery of the gasket and the annular attachment surface, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the diameters of the outer periphery of the gasket and the annular attachment surface of Jordan, as modified, to be less than 8 inches dependent upon the overall diameter of the central mounting portion of the wheel to which they contact with. As long as the gasket seals the space between the central mounting portion of the wheel and the brake/hub assembly, the diameters of the gasket the attachment surface are arbitrary.

8. Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Canadian patent No. 2,055,230 to Le Heiget in view of WO document no. 98/38048 to Yoshimura.

Regarding Claim 6, Le Heiget discloses a vehicle wheel and hub combination (see Figure 3) having most of the features of the instant invention including: a vehicle wheel 10 including an annular rim and an annular connecting section extending radially inwardly from said rim and rigidly connected thereto (see Figure 3), said connecting section having a plurality of stud-receiving holes therein spaced inwardly from said rim and spaced evenly and circumferentially about said wheel (see Figure 3); a wheel hub assembly including a rotatable radially extending, annular attachment surface (see Figure 3 and the surface where studs 38 are mounted thereon), wheel studs 38 extending from said attachment surface in an axial direction relative to a central axis about which said wheel is adapted to rotate, and a circular central cylindrical extension (see Figure 3 and the center projecting portion of the hub assembly in which bolts 38 surround) projecting axially outwardly from the center of said attachment surface, said cylindrical extension having an outer circumference spaced radially inwardly from said wheel studs (see Figure 3); an annular, flat, flexible gasket seal 24 having a substantially circular outer periphery and also a substantially circular central opening with a diameter corresponding closely to the diameter of said central cylindrical extension (see Figure 3 and the center opening of the gasket), said gasket seal being formed with a plurality of small openings 36 snugly and respectively accommodating said wheel studs each of which passes through a respective one of said small openings

and a respective one of said stud-receiving holes (see Figure 3); and wheel nuts 40 detachably connecting said vehicle wheel to said wheel hub assembly by means of said wheel studs with said gasket seal 24 tightly clamped between said connecting section and said attachment surface (see Figure 3), wherein said gasket seal 24 has a shape that conforms to an adjacent contact surface of said connecting section of the wheel (see Figure 3).

However, Le Heiget does not disclose that the gasket is made from a polyethylene material having a substantially circular outer periphery with a diameter that corresponds substantially to the diameter of the attachment surface.

Regarding the polyethylene material, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the gasket of Le Heiget to be formed from a polyethylene material as a matter of design preference dependent upon the desired strength, corrosive effects, and/or the operating environment for the gasket. Constructing the gasket to be formed of a polyethylene material would provide a flexible yet highly corrosive-resistant means in which to protect the wheel hub components from any dirt or debris that they may encounter.

Regarding the gasket outer periphery diameter, Yoshimura is relied upon merely for his teachings of a similar type gasket 53 (as described with respect to Claims 1-5 above) having a substantially circular outer periphery with a diameter that corresponds substantially to the diameter of the attachment surface 2 or 18.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the gasket of Le Heiget to have a substantially

circular outer periphery with a diameter that corresponds substantially to the diameter of the attachment surface as taught by Yoshimura so that the no debris or dirt could come into contact with the attachment surface from either side of the gasket. By constructing the gasket to be of the exact diameter as the attachment surface, the maximum amount of sealing that can occur between the attachment surface and the connection section of the wheel is present.

Regarding Claim 8, see drum brake 22 in Figure 3 having a rotatable brake drum on which the attachment surface is provided.

9. Claims 11 - 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Canadian Patent No. 2,055,230 to Le Heiget in view of WO document no. 98/38048 to Yoshimura as applied to claims 6 and 8 above, and further in view of U.S. Patent No. 4,989,697 to Denton.

Regarding Claim 11, Le Heiget, as modified, discloses most all the features of the instant invention as applied above, except for a second gasket seal mounted in the wheel hub assembly against an inner side of the brake drum as claimed.

Denton is relied upon merely for his teachings of a brake drum assembly (see Figure 1) having an annular, flexible gasket seal 60 mounted in said wheel hub assembly against an inner side of a brake drum 10 and spaced axially inwardly from said connecting section of the wheel, said gasket seal 60 having a substantially circular outer periphery 70, a substantially circular central opening (see the center opening of gasket 60) with a diameter corresponding closely to said diameter of said central cylindrical extension (inherently so), and a plurality of small openings 76 snugly and

respectively accommodating wheel studs which pass therethrough (see column 5 lines 38-45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a second gasket seal in the wheel and brake assembly of Le Heiget, as modified, as taught by Denton to better seal at least a portion of the inner side of the brake drum from debris or other contaminants (see in particular column 5 line 67 – column 6 line 2 of Denton which discusses this reasoning).

Regarding Claim 12, Le Heiget, as modified, do not disclose that the second gasket seal is made from a polyethylene material.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the second gasket of Le Heiget, as modified, to be formed from a polyethylene material as a matter of design preference dependent upon the desired strength, corrosive effects, and/or the operating environment for the gasket. Constructing the gasket to be formed of a polyethylene material would provide a flexible yet highly corrosive-resistant means in which to protect the wheel hub components from any dirt or debris that they may encounter.

Regarding Claim 13, Le Heiget, as modified, do not disclose that the second gasket seal is made of higher density polyethylene than the first gasket seal nor that the second gasket seal has a thickness less than 0.1 inch.

Regarding the second gasket higher density, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the second gasket seal of Le Heiget, as modified, to be made of a higher density

polyethylene than the first gasket seal to allow for 1) a greater heat tolerance for its use within the brake drum assembly and 2) for more flexibility for the connection between the wheel and the brake assembly where more torque and stress forces would occur. This way the second gasket mounted within the drum brake assembly would be stronger and better able to withstand heat generated by the internal brake components, while the less dense first gasket seal would provide the needed flexibility features.

10. Claims 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,989,697 to Denton.

Regarding Claim 14, see Claim 11 above regarding the features of the gasket 60 of Denton and further note that Denton discloses that his gasket seal 60 has a circular outer periphery with a first diameter corresponding substantially to an outer diameter of a drum mounting hub flange 12 of the brake and wheel assembly on which the gasket is to be used (see Figure 7 of Denton) and that the gasket seal 60 has a circular central opening with a second diameter substantially less than the first diameter (see Figure 3 of Denton and the center opening of gasket 60).

However, Denton does not disclose that his gasket is constructed out of polyethylene.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the gasket of Le Denton to be formed from a polyethylene material as a matter of design preference dependent upon the desired strength, corrosive effects, and/or the operating environment for the gasket.

Constructing the gasket to be formed of a polyethylene material would provide a flexible

yet highly corrosive-resistant means in which to protect the wheel hub components from any dirt or debris that they may encounter.

Regarding Claim 15, Denton discloses that the gasket seal 60 is able to conform to the inner surface of the drum when it is used (see Figure 1).

However, Denton does not specifically disclose that the gasket seal has a uniform thickness which is less than 0.1 inch.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the gasket of Denton to have a thickness which is less than 0.1 inch in order to create as thin a sealing structure as possible. The thinner the gasket for the wheel hub assembly the less complicated and cumbersome the overall wheel design.

Regarding Claim 16, Denton does not disclose that the small openings have a uniform diameter which does not exceed 5/8 inch.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the small openings of the gasket of Denton to have uniform diameters which do not exceed 5/8 inch as a matter of design preference dependent upon the size and diameter of the wheel studs which are to be accommodated in those openings. As long as the wheel studs fit through the openings and adequately secure the gasket to the wheel assembly, the diameters of those openings are arbitrary.

Regarding Claim 17, Denton does not disclose that the polyethylene material has a sufficiently high density so that it can absorb heat from the brake drum during use of the brake and wheel assembly without being significantly damaged.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the gasket seal of Denton to be made of a sufficiently high density polyethylene so that it can withstand a greater heat tolerance for its use within the brake drum assembly. This way the gasket mounted within the drum brake assembly would be stronger and better able to withstand heat generated by the internal brake components.

11. Claims 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,989,697 to Denton in view of Canadian Patent no. 2,055,230 to Le Heiget.

Regarding Claim 18, see Claim 14 above for the specifics of the wheel and drum brake assembly claimed.

However, again, Denton does not disclose that the gasket 60 is made of a flexible plastics material.

Le Heiget is relied upon merely for his teachings of a similar type gasket seal 24 made from a flexible plastics material (see the abstract of the reference).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the gasket of Denton to be formed from a flexible plastics material as taught by Le Heiget as a matter of design preference dependent upon the desired strength, corrosive effects, and/or the operating

environment for the gasket. Constructing the gasket to be formed of a plastics material would provide a flexible yet highly corrosive-resistant means in which to protect the wheel hub components from any dirt or debris that they may encounter.

Regarding Claim 19, see Claim 17 above.

Regarding Claim 20, see Claim 15 above.

Regarding Claim 21, Denton, as modified, does not disclose that the gasket seal has a thickness which is about 0.05 inch.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the gasket of Denton, as modified, to have a thickness which is less than 0.05 inch in order to create as thin a sealing structure as possible. The thinner the gasket for the wheel hub assembly the less complicated and cumbersome the overall wheel design.

12. Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,989,697 to Denton in view of Canadian Patent no. 2,055,230 to Le Heiget, as applied to claims 18-21 above, and further in view of WO document no. 98/38048 to Yoshimura.

Regarding Claim 22, Denton discloses most all the features of the instant invention as applied above, except for the claimed specifics of a second gasket seal clamped between the brake drum member and the connecting section of the vehicle wheel, wherein the second gasket seal has an outer circumference with a diameter corresponding substantially to an annular outer attachment surface.

Regarding the use of a second gasket seal, Le Heiget is relied upon merely for this teachings of a vehicle wheel and drum brake combination (see Figure 3) including an annular, flexible gasket seal 24 clamped between a brake drum member 22 and a connecting section of said vehicle wheel, said gasket seal 24 having a substantially circular outer circumference and a plurality of small holes 36 for accommodating wheel studs 38 which project outwardly from said outer attachment surface of said brake drum and through said small holes (see Figure 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the vehicle wheel and drum brake assembly of Denton to include a second gasket assembly between the brake drum member and the connecting section of the vehicle wheel as taught by Le Heiget in order to better seal and protect the space between the drum brake assembly and its connection to the wheel. By constructing a separate gasket seal at this location, both the inside and outside of the brake drum components would be adequately protected from the environment.

Regarding the second gasket having an outer circumference with a diameter corresponding to an annular outer attachment surface, Yoshimura is relied upon merely for his teachings of a similar type gasket 53 (as described with respect to Claims 1-5 above) having a substantially circular outer periphery with a diameter that corresponds substantially to the diameter of the attachment surface 2 or 18.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the gasket of Denton, as modified, to have a

substantially circular outer periphery with a diameter that corresponds substantially to the diameter of the attachment surface as taught by Yoshimura so that the no debris or dirt could come into contact with the attachment surface from either side of the gasket. By constructing the gasket to be of the exact diameter as the attachment surface, the maximum amount of sealing that can occur between the attachment surface and the connection section of the wheel is present.

Regarding Claim 23, see Claim 13 above.

Regarding Claim 24, Denton, as modified, does not disclose that both gasket seals have outer diameters which are less than 8 inches nor that the small openings and small holes both have uniform diameters which do not exceed 5/8 inch.

Regarding the outer diameters of the gaskets, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the diameters of the gaskets of Denton, as modified, to be less than 8 inches dependent upon the overall diameter of the central mounting portion of the wheel and drum brake assembly to which they contact with. As long as the gaskets seal the space between the central mounting portion of the wheel and the internal components of brake assembly, the diameters of the gaskets are arbitrary.

Regarding the diameters of the small openings and small holes, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the small openings and small holes of the gaskets of Denton, as modified, to have uniform diameters which do not exceed 5/8 inch as a matter of design preference dependent upon the size and diameter of the wheel studs which are to be

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accommodated in those openings. As long as the wheel studs fit through the openings and holes and adequately secure the gasket to the wheel assembly, the diameters of those openings and holes are arbitrary.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 4,995,484 to Kadel discloses a brake assembly having a corrosive inhibiting structure made of polyethylene.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pam Rodriguez whose telephone number is 571-272-7122. The examiner can normally be reached on Mondays 5 am -3:30 pm and Tuesdays 5 am -11 am.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Bucci can be reached on 571-272-7099. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Pam Rodriguez
Primary Examiner
Art Unit 3683

3/1/05

Pr
03/01/05